Remarks/Argument

Applicant submits this reply to the Office Action of January 27, 2005. Following this Amendment, claims 1-24 remain in this application, with ten (10') independent and fourteen (14) dependent claims. Original claims 1-23 were rejected under 102(e) as anticipated by U.S. Patent No. 6,690,371 ("Okerlund"). Claims 1-23 are substantially unchanged, with only minor edits to correct minor typographical or grammatical errors. Nevertheless, for at least the reasons discussed below, Applicant respectfully traverses this rejection.

Applicant traverses the characterization of Okerlund as relevant prior art, given that Okerlund does not teach or suggest the present invention. Specifically, as noted in the abstract, Okerlund is directed to:

> A method for rapid extraction and visualization of relevant data from a volume of image data includes rapidly producing reduced-fidelity images derived from an image volume, the reduced fidelity images having an adjustable visual parameter; adjusting the visual parameter of the reduced-fidelity images during the rapid production to select a desired adjustment; producing a full-fidelity image derived from the image volume; and applying the selected adjustment to the full-fidelity image.

Thus, Okerlund teaches the visualization of image data, not the capture of an screen image and processing of the captured screen image to control the application which generated the image. Indeed, no where does Okerlund describe or suggest the capturing of any information displayed on a screen and perform decision analysis based on this information capture as provided by the present invention, as explained below. ¶¶ 56-58.

The present invention, is directed to the automated control and execution of programs by analyzing the inputs used to generate certain program states, which are ascertained by polling a screen capture of a running application program. The present invention seeks to address the problem of integrating legacy and newer systems ¶ 6; ¶ 7. This is accomplished with runtime agents that use models to intelligently navigate systems, so that a single user interface may be used to control multiple applications. ¶ 18. To achieve this, the runtime agents determine the state of an application by polling the screen displayed by the application. ¶ 12. Through this polling, unique identifiers may be found and noted, thereby informing the integrating program of the state of the program. ¶ 12. Alternatively, a programmer may select regions of a screen for

the runtime agents. ¶ 13. The present invention provides for models that are used by runtime agents to intelligently navigate systems. Embodiments of the present invention may employ a recorder that "records in the computer memory a plan domain file which comprises each state of the presentation layer of another computer system, the available actions from each state, and the effect of any actions available in each state though navigating the other computer system in the user interface." ¶ 20. Embodiments of the present invention may employ a "fingerprinter" that "captures sections of each screen of the presentation space from at least one other computer system." ¶ 28. No where in Okerlund is there any suggestion of a runtime agent acquiring a screen capture of a presentation space. Moreover, Okerlund does not teach or suggest the simultaneous use of two different processes – one being the runtime agent and the other being the application from which the runtime agent captures sections of each screen of the presentation space.

Thus, Okerlund is neither reasonably pertinent to the particular problem with which the Applicant was concerned, nor directed to the field of Applicant's endeavor. Okerlund should not be deemed prior art. In any event, Okerlund does not disclose or suggest various features of the claimed invention and cannot therefore, anticipate claims 1-24.

The system of claim 1 comprises a "*screen* fingerprinter" stored in a computer memory that "selects at least one region and/or pattern of the screens of the presentation space of a computer application to be captured such that said at least one region and/or pattern of each screen is unique." Claim 1 (emphasis added). Similarly, the specification notes that a fingerprinter "captures sections of each screen of the presentation space from at least one other computer system." ¶ 28. Nowhere does Okerlund teach or suggest the capturing of a region and/or pattern of a screen of a presentation space. Examiner's statement that a "a fingerprinter is simply the software that acquires specific screen presentation data related to at least one computer" is an oversimplification of the meaning of "screen fingerprinter" as understood by one of ordinary skill in the art. The fingerprinter, as noted in the claim language and specification referenced above, acquires its data from data that is actually displayed upon a screen of a presentation space, not merely data that might eventually be displayed or modified to be displayed, as is Okerlund. In Okerlund, the end result and objective is to render some visualization on a screen. The present invention, in contrast, uses what is already being displayed on a screen *by another computer application* as a data source for runtime agents. This

understanding is confirmed by the specification, which notes that a "fingerprinter in the computer memory captures sections of each screen of the presentation space from at least one other computer system." ¶ 28. Thus, the fingerprinter's source is the actual screen display, which in Okerlund, the image on the screen is never used as a source of information. Moreover, Okerlund does not disclose the use of one process (performed by "a screen fingerprinter") to observe the operation of another process ("a computer application"), by monitoring the other process' state by selecting "at least one region and/or pattern of the screens of the presentation space of" the other process.

Examiner cites col. 2, ll. 22-35 of Okerlund. Here, Okerlund merely describes a system for *displaying* data acquired from an exam prescription subsystem, which acquires its data from a medical scan. Okerlund in no way teaches or suggests the use of a screen capture of any image displayed as part of an image space. The present invention comprises "a screen finger printer" which selects obtains its data from images presented on a screen, *see* claim 1, Okerlund, in contrast, obtains its data from a medical scan. Col. 3, l. 25-46. Okerlund does in any way teach the data acquisition of images displayed on a screen, and indeed never teaches the use of one process to observe and select the display of another process. Applicant respectfully requests the allowance of claim 1, and claims 2-4, which are dependent thereon.

With respect to claim 2, Examiner cites col. 3, ll. 35-47 of Okerlund. Here, Okerlund does not disclose or suggest the use of a fingerprinter, which is understood as an agent that selects a portion of an image already being displayed by another application. Claim 2 is not anticipated by Okerlund and should be allowed.

With respect to claim 3, Examiner cites col. 8, l. 28-42. Here, Okerlund does not teach or discuss the use of a "decision tree." Although a decision tree is one type of hierarchical data structure used to make *decisions*. The data structure noted in Okerlund is merely of data, not data that permits the making of decisions. Claim 3 is not anticipated by Okerlund and should be allowed.

With respect to claim 4, Examiner cites col. 3, ll. 35-47. For the reasons stated above, Okerlund neither teaches the use of a "fingerprinter" nor the use of a "decision tree." Claim 4 is not anticipated by Okerlund and should be allowed.

Claim 5 has been amended to include "a user interface" in order to provide an antecedent basis for "said user interface." The system of claim 5, as amended, comprises "a recorder" that

records in computer memory "a plan domain file which comprises each screen of the presentation layer of a computer application, the keystrokes and/or programs necessary to reach each state, the available actions from each state of each screen and the effect of any actions available in each state through navigating said computer application in said user interface." Examiner cites Col. 3, ll. 10-47 and col. 4, ll. 20-40. Neither here, nor elsewhere, does Okerlund teach or suggest the use of a "recorder," which by its plain terms indicates something which records a state (which is understood by one of ordinary skill, in light of the claims and specification, to be the recording of the state of another computer application). Nothing in Okerlund teaches or suggests the use of a domain file that comprises "*each screen of the presentation layer of a computer application*." Nothing in Okerlund teaches or suggests the use of a domain file that comprises "*the keystrokes necessary to reach each state*." Nothing in Okerlund teaches or suggests the use of a domain file that comprises "*the available actions from each state of each screen and the effect of any actions available in each state through navigating said computer application in said user interface*." Indeed, nothing is Okerlund teaches or suggests the use of an agent to record the operations of a computer application by recording what is displayed upon a screen. Claim 5 is not anticipated by Okerlund and should be allowed.

With respect to claim 6, Examiner cites col. 4, ll. 37-42. Here, Okerlund merely discloses the viewing of a 3-d visualization. Okerlund does not teach or suggest the generation of a file based upon an user's navigation of another computer system. The term "navigation," as understood by one of ordinary skill in the art in light of the claims and specification, refers to the interaction between a user and another computer application as a user explorers or undertakes use of the computer application. Okerlund merely discloses the remote viewing of what is already being displayed, not the recording of the activities of a user as the user interacts with another computer application. Claim 6 is not anticipated by Okerlund and should be allowed.

With respect to claim 7, Examiner cites col. 4, ll. 29-36. Here, Okerlund does not teach or suggest the automated navigation of another computer application. Claim 7 is not anticipated by Okerlund and should be allowed.

With respect to claim 8, Examiner cites col. 4, l. 20-40. As noted before, Okerlund does not teach or suggest the use of fingerprints nor domain files. Claim 8 is not anticipated by Okerlund, which does not even discuss a program's state, and should therefore be allowed.

With respect to claim 9, Examiner cites col. 4, ll. 54-63. Here, Okerlund does not include

pre-conditions or post-conditions for each state. These are not disclosed in Okerlund. Claim 9 is not anticipated by Okerlund and should be allowed.

The system of claim 10 comprises "a computer application model." As understood by one of ordinary skill in the art in light of the specification and claims, "a computer generated model" is generated by a recorder, thus provides information concerning the various states of an application, including the fingerprints of a state, the keystrokes needed to obtain the state, and the effect of any actions available in each state through navigating said computer application. ¶ 28; ¶ 20. These are not disclosed in Okerlund, as cited by the Examiner. Col. 3, ll. 10-21. Claim 10 is not anticipated by Okerlund and should be allowed.

Moreover, the system of claim 10 comprises "a navigation planner." Examiner states that a hierarchical data structure is a form of a navigation planner. This is incorrect. By its plain terms, a navigation planner *plans* how a computer application is to be navigated. A mere hierarchical data structure does not perform any actions on its own. An navigation planner, in contrast, must plan how a computer application is to be navigated to progress from one state to another. Nothing in Okerlund, as cited by the Examiner, Col. 8, ll. 29-42, suggests a navigation planner, let alone the use of an agent which navigates another computer program. Claim 10 is not anticipated by Okerlund and should be allowed.

With respect to claim 11, Examiner cites col. 8, ll. 60-67. Nothing in Okerlund suggests the use creation of a new navigation plan, that is, a *new way* by which a computer application is to be navigated or controlled. Claim 11 is not anticipated by Okerlund and should be allowed.

Claim 12 comprises a "recorder," which is synonymous with "recorder." As discussed above in connection with claim 5, Okerlund does not teach or suggest a recorder. Claim 12 also comprises a "fingerprinter." As discussed above in connection with claim 5, Okerlund does not teach or suggest a recorder. Claim 12 also requires the ability to form additional relationships between a screen and a domain file can be input through said user interface such that said computer application model generator can model said computer application. Examiner cites col. 3, ll. 36-47. Here, Okerlund does not teach or suggest the modeling of *a computer application*. Moreover, Okerlund does not teach or suggest the use of domain files, as discussed above in connection with claim 5. Claim 12 is not anticipated by Okerlund and should be allowed.

Claim 13 comprises a "runtime agent." Examiner misconstrues the meaning of runtime agent as used in the application. A run-time agent: "use the models to intelligently navigate each

11

system" and "can be used to implement systems with a single user interface." ¶ 18. Okerlund does not teach or suggest the use of runtime agents, which are not merely "involved in the execution of code," but must be capable of navigating another computer application. Claim 13 further comprises a "computer application model" which, as described above in connection with claim 10, is not taught or suggested by Okerlund. Claim 13 is not anticipated by Okerlund and should be allowed.

Claim 14 comprises a step of "taking a screen capture of each screen of the presentation layer of a computer application." Examiner cites col. 8, l. 27-67. Here, Okerlund is discusses rendering of a three-dimensional image based upon image slices obtain from a medical scan. Nothing in Okerlund teaches or suggests taking a "screen capture," that is, the capturing of an image of what is displayed on a screen.

Claim 14 further comprises "selecting areas of said screen captures to be examined for the presence of an attribute in said area." Examiner cites col. 8, ll. 7-17. Claim 14 further comprises "creating a decision tree such that each of said screen captures has a unique end node of said decision tree." As discussed above in connection with claim 3, nothing in Okerlund teaches or suggests the use of a decision tree. Claim 14 is not anticipated by Okerlund and should be allowed.

With respect to claims 15 and 16, Examiner cites col. 3, ll. 36-47 and col. 8, ll. 7-17. Here, Okerlund does not teach or suggest the use of screen captures, and thus does not anticipate the requirement of claim 15 and claim 16 that areas within such screen captures are, respectively, selected automatically and manually. Claims 15 and 16 are not anticipated by Okerlund and should be allowed.

With respect to claim 17, Examiner cites col. 3, ll. 36-47; col. 8, ll. 27-47. As discussed above in connection with claim 3, Okerlund does not teach or suggest the use of a decision tree. Claim 17 is not anticipated by Okerlund and should be allowed.

Claim 18 requires the "recording in a plan domain file each screen of the presentation layer of said computer application, the keystrokes necessary to reach each state of each screen of said computer application, the states of each screen, and the effect of any actions taken on each screen." As discussed above with respect to claim 5, Okerlund does not teach or suggest any of these features. Claim 18 is not anticipated by Okerlund and should be allowed. Moreover, claims 19 and 20, which depend from claim 18, should similarly be allowed.

Claim 21 requires "accessing at least one computer application model that encapsulates information on how at least one computer application is controlled and/or data is accessed." As discussed above in connection with claim 10, Okerlund does not teach or suggest the use of a computer application model. Claim 21 further comprises a step of "planning a path through said at least one computer application that will achieve the goal of said problem statement." As discussed above in connection with claim 10, Okerlund does not teach or suggest the use of navigation planning. Claim 21 is not anticipated by Okerlund and should be allowed.

Claim 22 comprises a step of "taking a screen capture of each screen of the presentation layer of a computer application." As discussed above in connection with claim 1, Okerlund does not teach or suggest the use of a "screen capture." Claim 22 further comprises a step of "creating a decision tree such that each of said screen captures has a unique end node of said decision tree." As discussed above in connection with claim 3, Okerlund does not teach or suggest the use of decision trees. Claim 22 further comprises "recording in a plan domain file each screen of the presentation layer of said computer application, the keystrokes necessary to reach each state of each screen of said computer application, the states of each screen, and the effect of any actions taken on each screen." As discussed above in connection with claim 5, Okerlund does not teach or suggest the use of a "domain file" as is understood by one of ordinary skill in the art in light of the claims and specification.

Applicant respectfully traverses examiner's rejection of claims 1-23 as being anticipated by Okerlund and requests the allowance of claims 1-23 in view of the arguments above. Likewise, it is believed that the present invention similarly overcomes the other cited reference for these and other reasons. New claim 24 has been added to clarify the above noted differences and should be allowed for the reasons stated above.

13

Conclusion

In view of the foregoing, Applicant respectfully submits that this application is now in condition for allowance. Favorable reconsideration and prompt allowance are earnest solicited. Should the Examiner believe that anything further is necessary to expedite prosecution of this application, the Examiner is invited to contact Applicant's representative at the telephone number listed below.
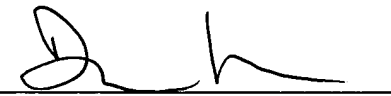
If there are any additional fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1349.

Respectfully submitted,

Dated: November 14, 2005   By:_____

                                               Celine Jimenez Crowson

HOGAN & HARTSON LLP   Registration No. 40,357
555 13th Street, N.W.
Washington, D.C. 20004
Telephone: 202-637-5600   David D. Nelson
Facsimile: 202-637-5910   Registration No. 47,818
Customer No. 24633